



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,513	04/01/2004	Nobuyoshi Wakasugi	01-593	6470

23400 7590 03/29/2006

POSZ LAW GROUP, PLC
12040 SOUTH LAKES DRIVE
SUITE 101
RESTON, VA 20191

EXAMINER

BONANTO, GEORGE P

ART UNIT	PAPER NUMBER
----------	--------------

2855

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/814,513

Applicant(s)

WAKASUGI ET AL.

Examiner

George P. Bonanto

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/1/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/9/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 3-6, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Applicants' Admitted Prior Art (AAPA).

As to claim 1, AAPA discloses a pressure sensor to be mounted on an intake system module of an engine (intake system module 1; Figs. 5 and 6) comprising a sensor IC (page 2, lines 4-6) having a pressure sensor element (page 2, lines 12-13) covered with mold resin (page 2, lines 12-14) the mold resin being provided with a pressure introduction hole extending outward from the pressure sensor element so as to open to an outer surface thereof (page 2, lines 4-23) a board on which the sensor IC is mounted (page 2, lines 11-12 and Fig. 6) a case in which the sensor IC and the board are accommodated (page 2, line 12 and Fig. 6) the case being provided with a pressure introduction inlet penetrating a wall thereof (page 2, line 16 and Fig. 6) wherein the case is fixed to an outer wall of the intake system module so that the pressure introduction inlet is opposed to a pressure introduction outlet provided in the outer wall (rubber hose 10 fixes sensor IC to outer wall of intake system module; Figs. 5 and 6 and page 2, lines 16-20) and an interposed member including a resilient member including a resilient member and having a communication hole, the interposed member being disposed between an inner wall of

Art Unit: 2855

the case and the outer surface of the mold resin so as to allow the pressure introduction inlet to communicate with the pressure introduction hole without air leakage (rubber hose 10 interposed between inner wall of case and the outer surface of the mold resin; Fig. 6).

As to claim 3, AAPA further discloses that the interposed member is resiliently deformed so as to contact air tightly with the inner wall of the case and the outer surface of the mold resin (page 2, lines 21-23 and Fig. 6).

As to claim 4, AAPA further discloses that the intake system module is provided in an interior thereof with an intake air passage through which an intake air is supplied to the engine (page 1, line 25 to page 2, line 1 and Fig. 5).

As to claim 5, AAPA further discloses that the pressure sensor is incorporated in an ECU for controlling the engine as an integrated body (ECU 9 includes sensor IC13; page 2, lines 4-6 and Figs. 5 and 6) and the ECU includes engine control devices in addition to the sensor IC, which are necessary for controlling the engine (engine control devices; page 2, line 5) mounted on the board in the case at positions where communication with the pressure introduction inlet is blocked by the interposed member (communication with the pressure introduction inlet is blocked by the hose 10 at all locations within the case 11; Fig. 6).

As to claim 6, AAPA discloses a pressure sensor to be mounted on an intake system module of an engine, the pressure sensor comprising a sensor IC (sensor IC 13; Fig. 6) mounted on a board (board 12; Fig. 6) the sensor IC having a pressure sensor element (page 2, lines 12-13) covered with mold resin (page 2, lines 12-14) the mold resin being provided with a pressure introduction hole extending outward from the pressure sensor element so as to open to an outer surface thereof (page 2, lines 4-23) a case in which the sensor IC and the board are

Art Unit: 2855

accommodated (case 11; Fig. 6) the case having a pressure introduction inlet penetrating a wall thereof (hose insertion bore 11a; Fig. 6) the case fixed to an outer wall of the intake system module so that the pressure introduction inlet is opposed to a pressure introduction outlet provided in the outer wall (case 11 fixed to intake system module 1 by hose 10 attached at connection port 6a; Fig. 5) and a resilient member having a communication hole (hose 10; Fig. 6) the resilient member being interposed between and contacting an inner wall of the case and the outer surface of the mold resin so as to allow the pressure introduction inlet to communicate with the pressure introduction hole without air leakage (hose 10 interposed between inner surface of case 11 and an outer surface of mold resin; Fig. 6).

As to claim 8, AAPA further discloses that the intake system module includes an intake air passage in an interior thereof, through which an intake air is supplied to the engine (Fig. 5).

As to claim 9, AAPA further discloses that the pressure sensor is incorporated in an ECU for controlling the engine as an integrated body (ECU 9 includes sensor IC13; page 2, lines 4-6 and Figs. 5 and 6) and the ECU includes an engine control device in addition to the sensor IC, which are necessary for controlling the engine (engine control devices; page 2, line 5) mounted on the board in the case at positions where communication with the pressure introduction inlet is blocked by the interposed member (communication with the pressure introduction inlet is blocked by the hose 10 at all locations within the case 11; Fig. 6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2855

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' Admitted Prior Art (AAPA), as applied to claims 1, 3-6, 8, and 9 above, in view of U.S. Patent No. 6,590,777 to Morino et al.

As to claims 2 and 7, AAPA fails to explicitly disclose that the interposed member is a sealing resin with which an interior of the case is filled except the communication hole so as to encompass the sensor IC and the board.

Morino et al. disclose a pressure sensor for an intake air system including an interposed member that is a sealing resin with which an interior of a case is filled except a communication hole so as to encompass a sensor IC and a circuit board (molding resin 47; Fig. 5).

It would have been obvious to one of ordinary skill in the art to modify the pressure sensor system of AAPA by including the molding resin of Morino et al. in order to protect the ECU electronics from vibration and from contamination by the intake air that may contain chemicals such as fuel.

Response to Arguments

Applicant's arguments filed 9 February 2006 have been fully considered but they are not persuasive.

In response to the rejection of claims 1-5, Applicants argue that AAPA fails to disclose an interposed member disposed "between an inner wall of a case and an outer surface of a mold resin so as to allow the pressure introduction inlet to communicate with an [sic] pressure introduction hole without air leakage." Applicants' argument rests on the premise that the hose

Art Unit: 2855

10 of AAPA extends through the case 11, and that the hose 10 contacts only the pressure introduction pipe 13b. This argument is not convincing because:

(1) there is no limitation in the claims that the interposed member does not extend through the case;

(2) there is no limitation in the claims that the interposed member must contact the inner surface of the case. The claim requires only that the interposed member is disposed between an inner wall of the case, e.g. the lower surface of the top of the case, and an outer surface of the mold resin, so as to allow the pressure introduction inlet to communicate with the pressure introduction hole without air leakage (inasmuch as the intake air is kept entirely within the tube 10, this limitation is met without contacting the case); and

(3) the hose 10 of AAPA, as shown in Fig. 6 of Applicants' disclosure, contacts both an outer surface of the mold resin (at least the outer surface of the pressure introduction pipe 13b) and an inner surface of the case (at least inner surface 11a as shown in Fig. 6). Thus the limitation lacking as described in (2) above, would nevertheless be met by AAPA.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 2855

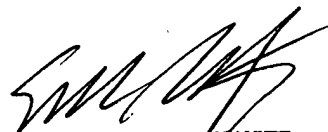
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George P. Bonanto whose telephone number is (571) 272-2182. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GPB
20 March 2006


EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800